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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,904	12/01/2003	J. Rodney Walton	030412	3195
23696 7590 11/13/2008 QUALCOMM INCORPORATED 5775 MOREHOUSE DR. SAN DIEGO, CA 92121			EXAMINER JAIN, RAJ K	
			ART UNIT 2416	PAPER NUMBER
			NOTIFICATION DATE 11/13/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/725,904	Applicant(s) WALTON ET AL.	
	Examiner RAJ JAIN	Art Unit 2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 8-11, 16, 18-21, 24, 25, 29-31, 33, 34, 37-40 and 43 is/are rejected.
- 7) ☒ Claim(s) 5-7, 12-15, 17, 22, 23, 26-28, 32, 35, 36, 41, 42, 44 and 45 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 37-45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The subject claims recite "machine readable medium" however, there is no support in the specifications to define what constitutes a "machine readable medium". Furthermore, applicant has amended subject claims to include "computer program product", however, there is no support in the specifications for computer program product".

Claim Rejections - 35 USC § 101

Claims 37-45 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The subject claims recite "computer program product" which is interpreted to represent a computer program although not explained explicitly in the specifications, however, a computer program by itself is merely a set of instructions or functional descriptive material which under current 101 guidelines is interpreted to be Non-statutory subject matter and therefore rejected accordingly.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2416

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4,8-11,16, 18-21, 24,25, 29-31,33,34, 37-40 and 43 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Akella et al (US 2003/0202492 A1)

Regarding claims 1, 9, 20, 25, 30, 34, 37, 40 and 43, Akella discloses a method for processing information in a communication system (abstract), comprising:

partitioning a control channel used for transmitting control information into a plurality of subchannels (Figs. 2 & 7, Para 6, 31, 32 and 40 control channels R-DCCH and F-DCCH are partitioned into subchannels I and Q which are used to transmit and receive control message), each subchannel being operated at a specific data rate (Fig. 7; Para 57 each subchannel carries its specific data rate); selecting, for each of one or more user terminals, one of the subchannels to be used for transmitting control information from an access point to the respective user terminal, based on one or more selection criteria (Paras 54-56, channel selection is based on different factors); and transmitting control information from the access point to a particular user terminal on a particular subchannel selected for the respective user terminal (Para 40 control information is transmitted to the mobile via one of the selected subchannels I or Q as appropriate).

Regarding claims 2, Akella discloses control information is transmitted in a segment of a data frame specifically allocated for the control channel (Fig. 4, paras 44-

47, specific control channel allocation is performed based on bit assignment as needed).

Regarding claims 3, 4, 21, 31, and 38, Akella discloses each subchannel is associated with a specific set of operating parameters (Para 30-31, 56; and Fig. 7 which shows different data rates and PAR values or SNR).

Regarding claims 8, 19, 24, 29, 33, and 39, Akella discloses the one or more selection criteria are selected from the group consisting of a first criterion corresponding to a link quality associated with the respective user terminal (link quality is measured as amount of data traffic on I and Q sub channels, para 39), a second criterion corresponding to quality of service requirements associated with the respective terminal (Quality of service is user defined by SNR or PAR values, Fig. 7, higher SNR translates to better quality and vice versa), and a third criterion corresponding to a subchannel preference indicated by the respective terminal (Sub channel preference would be based on data traffic on the I and Q sub channels and the desired SNR levels, thus a sub channel with lower traffic will be preferred over higher traffic channel para 39).

Regarding claims 10, and 11, Akella discloses performing a decoding procedure to decode the one or more subchannels, starting with a subchannel operated at a lowest data rate, until at least one of a plurality of conditions is met (Para 52, Fig. 7; system decodes data at received data rate).

Regarding claim 16, While Akella explicitly does not disclose a cyclic redundancy check (CRC) check, however, one skilled in the art will appreciate that CRC is inherent

within a wireless system for improving quality of voice/data transmission within a link, thus Akella inherently incorporates CRC within its system.

Regarding claim 18, Akella discloses plurality of user devices 120 (Fig. 1) where each device inherently has a Medium Access Control (MAC) identifier assigned by the manufacturer of the device to uniquely identify each device.

Allowable Subject Matter

Claims 5-7, 12-15, 17, 22, 23, 26-28, 32, 35, 36, 41, 42, 44 and 45 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments filed August 1, 2008 have been fully considered but they are not persuasive.

With regards to amendments to claims 37-42, Applicant has amended the claims to include "computer-program product for processing information in a communication system, comprising a computer readable medium having instructions stored thereon, the instructions being executable by one or more processors and the instructions comprising:"

Examiner fails to find support for this amendment in the specifications. Applicant states in the "Remarks" section that support for these amendments is provided at least by paragraph [0123], however, the original specifications has only paragraph [00117]. Examiner requests further clarification.

With regards to claims 1, Applicant contends “Akella fails to disclose selecting, for each of one or more user terminals, one of the sub channels to be used for transmitting control information from an access point to the respective user terminal, based on one or more selection criteria”.

Examiner respectfully disagrees, Akella discloses channel allocation with sub channels I and Q (Fig. 4, paras 44-47), having plurality of control channels including RDCCH, FDCCH, RSCH (2), RSCH (1) (Figs. 2 & 7, Para 6, 31, 32 and 40 specifically control channels R-DCCH and F-DCCH are partitioned into sub channels I and Q which are used to transmit and receive control messages). The use of specific sub channel is based on specific user requirements and/or criteria at any given time (Paras 54-56, channel selection is based on different factors, see para 56 below).

[0056] Based on one or more of the channel metrics, the channel controller makes a channel assignment (or it may choose to reassign some or all of the channels) (block 610). For example, if a bandwidth utilization measurement shows that one sub channel is carrying more data than the other, then the channel controller may wish to assign the new call or new channel onto the sub channel with the lower channel utilization. Alternatively, a simple count of available Walsh codes may tell the channel controller to assign the new call or new channel to the sub channel with more available Walsh codes. If the metric shows that the sub channels are essentially equal, then the channel controller may select the sub channel assignment at random or it may use a priority based scheme that can be based on a number of factors, including the channel that it is attempting to allocate.

Since the claim specifically fails to define a specific criteria, the various criteria that may be included are PAR values, data rates, sub channel quality (see para 57-58). Thus based on above, examiner respectfully asserts the Akella does in fact teach all limitations of claim 1 and therefore the rejection to claim 1 is sustained.

Furthermore, rejection to claims 8-11,16, 18-21, 24, 29-31, 33,34, 37-40 and 43, is sustained based on above cited art.

Regarding claim(s) 5, 22, 26 and 32, the rejection to subject claims is withdrawn and have now been objected to as being allowable.

With regards to claims 34, 40 and 43, again Akella discloses all limitations which are similar to claim 1 and further discloses decoding of sub channels starting with the lowest data (see Figs. 4 and 7, the lowest data rate is relative to specific sub channel of choice at any given time, thus for example RFCH have a rate of 1.5 (KBPS) will be decoded first over the other channels). As to conditions being met, since specific condition is defined, Examiner has chosen SNR or Eb/No (for CDMA) as the desired condition to be met for satisfactory quality requirements. Thus with based on above reasoning, Examiner asserts Akella does meet all limitations of claims 34, 40 and 43 and therefore the rejection to claims 34, 40 and 43 is sustained.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RAJ JAIN whose telephone number is (571)272-3145. The examiner can normally be reached on M-TH.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Raj K. Jain/

Examiner, Art Unit 2416

/William Trost/

Supervisory Patent Examiner, Art Unit 2416